Pushing the Envelope			
2005 Mathematics			
Curriculum Frameworks			
Connecticut Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
History of Aviation Propulsion (pgs. 5-9)	CT	MA.5.3.3.a	Solve problems in the measure of time and in converting units of length in the customary and metric systems using specific ratios.
Physics and Math (pgs. 43-63)	CT	MA.5.1.2.a	Students should represent and analyze quantitative relationships in a variety of ways: Recognize that a change in one variable may relate to a change in another variable.
Physics and Math (pgs. 43-63)	CT	MA.5.2.1.d	Students should understand that a variety of numerical representations can be used to describe quantitative relationships: Represent ratios and proportions and solve problems using models and pictures.
Pushing the Envelope			
2005 Mathematics			
Curriculum Frameworks			
Connecticut Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Types of Engines (pgs. 11-23)	CT	MA.6.3.3.b	Use specific ratios to convert between measures of length, area, volume, mass and capacity in the customary and metric systems.
Chemistry (pgs. 25-41)	CT	MA.6.3.1.b	Students should use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems: Examine the relationships between the measures of area of 2-dimensional objects and volumes of 3-dimensional objects.
Chemistry (pgs. 25-41)	CT	MA.6.3.3.b	Students should develop and apply units, systems, formulas and appropriate tools to estimate and measure: Use specific ratios to convert between measures of length, area, volume, mass and capacity in the customary and metric systems.
Physics and Math (pgs. 43-63)	CT	MA.6.2.1.d	Students should understand that a variety of numerical representations can be used to describe quantitative relationships: Compare quantities and solve problems using ratios, rates and percents.
Pushing the Envelope			
2005 Mathematics			
Curriculum Frameworks			
Connecticut Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	

Chemistry (pgs. 25-41)	CT	MA.8.3.1.a	Students should use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems:Explore the relationships among sides, angles, perimeters, areas, surface areas and volumes of congruent and similar polygons and solids.
Chemistry (pgs. 25-41)	CT	MA.8.3.3.a	Students should develop and apply units, systems, formulas and appropriate tools to estimate and measure: Use a variety of concrete methods, including displacement, to find volumes of solids.
Physics and Math (pgs. 43-63)	CT	MA.8.2.2.a	Students should use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities: Solve problems involving fractions, decimals, ratios and percents.
Pushing the Envelope			
2005 Mathematics			
Curriculum Frameworks			
Connecticut Mathematics			
Grades 9-12			
Activity/Lesson	**State**	**Standards**	
Physics and Math (pgs. 43-63)	CT	MA.9-12.1.2.a	Students should represent and analyze quantitative relationships in a variety of ways: Represent and analyze linear and nonlinear functions and relations symbolically and with tables and graphs.